

**Vector Winter Lecturer**

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**The Future Landscape of Telecommunications**

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## **Introduction**

When Simon invited me to deliver the final address of the Winter Lecture series, he suggested I discuss the telecommunications landscape following last years' amendment of the Telecommunications Act. I was more than happy to speak to the topic as it is those changes to the Act that encouraged me to take up the role of Telecommunications Commissioner.

Before I talk about the future landscape, I would like to briefly reflect on how we got to the current regime.

My background is in competition law. I acted for Bell South during the 90's. There was no industry-specific regulation; the only constraint on Telecom's behaviour was generic competition law. As the Privy Council observed, this approach was unique.<sup>1</sup>

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<sup>1</sup> "So far as has been discovered in all other countries where private competition has been introduced into a public telephone system, would-be competitors have been given statutory rights to interconnect with the public system, the terms on which these rights are to be granted being settled by a statutory body. New Zealand has taken a different course."  
Telecom Corporation of New Zealand Ltd v Clear Communications Ltd [1995] 1NZCR 385 and 390 (PC)

The general climate of that period is best summarised in a couple of quotes: Clear's Chief Executive, the late Andrew Makin, after the Government's review of light handed regulation following the Privy Council decision in Telecom v Clear had determined no change to the regime was needed remarked:

“We saw a horse coming over the horizon and we thought it was Wyatt Earp bringing some law to the town. Lo and behold, today we find it was Don Quixote”<sup>2</sup>

Maurice Williamson, the Minister at that time explained the government's lack of action on to complaints by entrants about Telecom's behaviour on the basis that they had “whinged every day since they first got here....even the boy that cried wolf didn't get to cry wolf this much before they started ignoring him”<sup>3</sup>

The “boys who cried wolf”; Clear, Bell South and Saturn, ultimately withdrew bloodied and bruised. <sup>4</sup>

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<sup>2</sup> “Government backs away from Telecom fight”, *National Business Review*, 28 June 1996

<sup>3</sup> “Williamson counter-attacks Telecommunications Critics”, *Infotech*, Monday 4 August 1997

<sup>4</sup> Bell South was bought by Vodafone in 1998, Telstra merged its NZ operations with Saturn in 1999 and Telstra Saturn bought Clear to form TelstraClear New Zealand in 2001

## **The 2001 Reforms**

Eventually the complaints by entrants could no longer be ignored by Government and the Fletcher Inquiry was undertaken.

The outcome, the 2001 Telecommunications Act was, compared to overseas regulatory environments, a tentative step towards regulation. A Telecommunications Commissioner was appointed, and an access regime established, under which the Commission could arbitrate on bi-lateral disputes of regulated services. It was also given inquiry powers to consider and recommend regulation of new access services.

With 10 years of industry frustration built up during the 90s, it is not surprising that much of the time of my predecessor, Douglas Webb's was spent addressing the build up of complaints around interconnection. He firmly established the role of the Commissioner with an industry that did not initially welcome the role, and built the framework for implementing the Government's telecommunications service obligations.

The telecommunications landscape did begin to alter. Some of the smaller players became more active, although compared to other OECD countries, the level of competition remained limited.

In December 2005 in response to a claim that New Zealand was slipping behind its OECD peers in broadband services, the Government commenced a stocktake of the sector. While the focus was on the broadband market, specifically broadband performance as a factor in economic performance, the review also considered overall performance in the sector. It concluded the sector was performing poorly, and that a key reason for the poor performance was lack of effective competition.

### **The 2006 Reforms**

This led to the introduction in 2006 of reforms including the unbundling of the local loop, the operational separation of Telecom, ongoing investigation into investment in the rural areas and the government sector, greater access to spectrum and a review of TSO obligations.

For the Commission, the most significant change was the shift to a proactive role from the reactive role under the 2001 Act.

The key changes introduced by the 2006 Amendment are:

- The mandatory unbundling of the copper local loop, (UCLL) and the introduction of a new regulated bitstream service (UBA).
- the Commission now determines terms and conditions of these services on an industry-wide (rather than bilateral) basis.
- new investigative and enquiry powers
- tools to ensure transparency of behaviour (specifically the role of the Commission to oversee Telecom's operational separation, including accounting separation), and
- strong enforcement tools

A key feature of the new regime is the Standard Terms Determination (STD):

An STD includes all price and non-price terms necessary for an access seeker to acquire a regulated service without having to resort to another

agreement. The Commission must give notice that it has initiated a standard terms development process, and conduct one or more scoping workshops, before giving written notice to an access provider to prepare a Standard Terms Proposal. The Proposal is subject to public submission, after which the Commission prepares a Draft Standard Terms Determination. This is subject to public submission and cross submissions, following which there is a public hearing for all interested parties. Only after this process has been completed does the Commission prepare a Standard Terms Determination.

The Commission has initiated standard terms development processes for five regulated services –

- unbundled local loop (UCLL);
- unbundled bitstream access (UBA);
- co-location for UCLL; and
- two backhaul services, one for UCLL and the other for UBA.

The local loop connects an end user's premises to the Telecom exchange.

Local loop unbundling allows an access seeker to rent direct access to that link and connect its own equipment, placed in the telecom exchange, in

order to deliver services to customers over its own network, without being dependent on the rest of Telecom's network and services.

The copper loop was originally designed for voice communication only, which is carried at a low frequency (4kHz or below). Copper can however carry signals over a wide range of frequencies, and DSL technology was developed to transmit data over the higher frequencies (above 25kHz) that voice did not use. The higher the frequency, the greater the bandwidth (and therefore speed), although the shorter the distance that that speed can be maintained. VDSL2 claims speeds in excess of 30Mbps over 800m.

UBA is a Telecom wholesale bitstream product. As an alternative to renting the local loop, and putting its own equipment into Telecom's exchanges, an access seeker can purchase the service from Telecom.

The previous wholesale Telecom broadband services required a wholesale customer to also take the voice service offered by Telecom. The UBA service can be purchased with or without the voice service; without voice it is known as naked DSL. Splitting the broadband service from the voice

service opens up the possibility of VoIP services being provided to New Zealand consumers.

The UCLL service allows greater innovation than UBA, as operators can provide faster transmission speeds, different contention ratios and different shaping policies than the incumbent. In the UK (where more than 3 million lines are unbundled) it has resulted in UCLL operators introducing new technologies in advance of the incumbent. The same result is likely in New Zealand; Orcon for instance, has announced that it will launch VDSL2 in 2008, with packages of broadband, video services, internet television and a phone line for \$50 - \$60 per month,<sup>5</sup>

While less innovation is possible with UBA, which involves reselling the Telecom service, in areas where there is no business case for local loop unbundling, bitstream products are likely to fill the gap.

Over the last month the industry has been attending our conferences on the Commission's UCLL and UBA draft determinations. All parties have acted cooperatively, and shown a readiness to compromise on issues where

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<sup>5</sup> NZ Herald, January 16 2007

appropriate. The adversarial nature of the old regime has gone. I have been impressed with the approach of the Telecom wholesale team. Their active engagement in these processes has got past many of the “trust issues” that have dogged the industry in the past. Another very positive factor has been the role of the Telecommunications Carriers Forum in reaching agreed positions on the majority of non-price terms, which were then incorporated by Telecom into its Standard Terms Proposal.

We are now working on the final determinations for UCLL (7 November) and UBA (10 December) and are at the submission stage on Telecom’s draft proposal for the backhaul services.

## **Mobile**

While fixed-line infrastructure and broadband issues have been dominating the debate recently, the Commission is also currently undertaking significant work in the mobile market. This is an area which has been somewhat overshadowed by the broadband debate.

In line with its review of regulated services last year, the Commission conducted a review of market entry issues into the cellular mobile market.

This review concluded that a new player in the mobile market faced considerable barriers to entry, including difficulty in negotiating roaming and co-location arrangements with the established players.

The Commission initiated an investigation into the desirability of amending roaming and co-location services, specifically by amending the non-price terms of the roaming service, and designating roaming and colocation. (i.e. making them subject to price regulation).

In the course of this process, the Commission received a proposed undertaking from Vodafone outlining a commercial proposal for its national roaming and co-location services. The formal undertaking process was introduced by the 2006 Act, and allows the Commission to recommend acceptance of an undertaking from an access provider in lieu of regulation.

A conference was held earlier this month. We expect to release our final recommendation to the Minister on both the investigation and the undertaking in December.

## **Sector Monitoring**

In the past the Commission has not had a formal monitoring role. Pricing data from industry could be gathered in the course of an investigation, but it necessarily provided a snapshot of the market at the time of the investigation. Monitoring powers were introduced in 2006, giving the Commission the ability to collect information over time in a more systematic way. This will allow us to identify issues at an early stage, and will equally enable us to identify if and when regulation of particular services is no longer warranted.

We now issue quarterly monitoring reports, and will provide a more comprehensive annual report. These will give industry and the public, the opportunity to see more clearly the strengths and weaknesses of our telecommunications market. (Incidentally, the first of these reports generated more media interest than anything we had done since the first local loop recommendation. Even allowing for a slow news day, I think that this reflects the importance of telecommunications services to Kiwi consumers.)

## **Operational Separation**

The Commission has an important role in implementing and enforcing the operational separation of Telecom. Telecom will this week submit its proposed separation plan and undertakings to the Government and following the Minister's Determination this will be open for public submission.

Obviously we have a strong interest in the ultimate shape of any Telecom undertakings.

### **Future Landscape**

So what does the future landscape look like? What are the Commission's priorities, and the issues I see on our future horizon?

The Commission's immediate task is very simple. We want to complete the major pieces of regulatory business – setting terms and conditions for UCLL and UBA, and finalise our mobile services investigation - by the end of this calendar year. Next year our focus will be on implementation - of UCLL, UBA, and of course the Telecom separation undertakings when they have been agreed and come into effect.

The Commission is very conscious of the need to finalise the key regulatory settings arising from the 2006 Amendment, as soon as possible, and for this reason set tight timetables to achieve this outcome. Before the end of this year, the price and non-price terms for UCLL and UBA will have been determined, as will the terms of operational separation. This is an amazing achievement when you consider that this time last year there was still a month to pass before the Select Committee reported back to Parliament on the Telecommunications Amendment Bill.

It's worth noting that while regulatory certainty is important, commercial certainty is not a feature of fast-moving technology-driven telecommunications markets. We have seen significant changes in strategy and business models over the past two years:

- The stand-alone ISP deriving revenues from dial-up Internet access is becoming increasingly uncommon. Instead, we have observed the expansion of ISP businesses into toll services and broadband access, and, more recently, the acquisition of key brands by larger players – Vodafone/Ihug and Kordia/Orcon.

- TelstraClear has retreated somewhat from its wider ambitions in the mobile market space, to focus on its core business.
- Vodafone, having acquired Ihug, will soon realise its long foreshadowed plan to enter the local calling market.
- Telecom has announced its move into WCDMA technology, and expects its new mobile network will be operational by late 2008.
- NZ Communications have recapitalised and announced an intention to launch a third mobile network by mid 2008
- The Government is in the process of auctioning management rights to radio spectrum in the 2.3 and 2.5Ghz band, suitable for WiMax technologies and Universal Mobile Telecommunications System Long-Term Evolution (UMTS-LTE). WiMax is a technology that has enthusiastic supporters and detractors, but it still offers some potential for bypass of the traditional broadband access network. The existing 800 & 900 bands are due to expire, and the Ministry is reviewing options for their future.

- Finally, there is also a change of personnel both in the Commission with my appointment, and at the top at Telecom New Zealand. There is no doubt that the future of the industry will be influenced by the attitudes of key individuals. While Dr Reynolds has been on board less than a month I am encouraged by his initial approaches to the challenging issues before us.

In this rapidly changing commercial and technical environment, we want to create conditions where all players have a high degree of assurance of the regulatory regime. It will then be up to competitors to do their best to create that commercial uncertainty, by providing innovative and challenging products and services that encourage other players to respond in the market.

By this time next year, UCLL will be a reality in at least key urban exchanges. The 2007 OECD telecommunications report noted that “In a number of OECD countries, local loop unbundling changed the competitive landscape”.<sup>6</sup> You will have seen the offers made by, ihug and Orcon a few

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<sup>6</sup> OECD Communications Outlook 2007, 13

months ago based on their UCLL trial at a single exchange – You ain't seen nothing yet.

The new UBA services will be available, and enhanced UBA close to being rolled out, providing consumers with greater choice, including for the first time an ability to receive broadband services without a voice service.

A third mobile player will have entered the market, and Telecom will have launched, or be close to launching its new mobile network.

The greater competition that these initiatives deliver to the market will drive further investment in new technologies. As Ofcom's Future Broadband report noted, it is the most competitive telecoms industries that deliver the highest levels of net investment.<sup>7</sup>

Which leads us to Next Generation Networks:

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<sup>7</sup> Future Broadband, Ofcom, 26 September 2007, 10

Next Generation Networks are the next phase of telecommunications development that is being observed throughout the world. The term means different things to different people.

Generally, the term involves:

- The replacement of existing legacy switched core networks with packet-based all IP networks (NGN); and
- fibre rollouts into the local loop either to the cabinet (cabinetisation) or the street.

This debate around broadband and fibre roll out is being conducted throughout the developed world, as it is in New Zealand. It is also clearly an issue high on the political agenda throughout the OECD.

The issue is already before the Commission, in terms of the future roll out of fibre to the cabinet, which risks stranding the DSLAMs installed by access seekers at the exchange. This was one of the issues discussed at the UCLL Conference, and a 24 month forecasting model has been proposed.

The Act also provides for subloop unbundling (unbundling the loop at the cabinet), although the Commission has accepted the industry's advice that this should be deferred until the current reforms are implemented.

2007 has been a year of regulatory uncertainty, as we transition to the new regime. 2008 will be the year that consumers start to see the benefits from those reforms.